

**REMARKS**

**1. Amendments to the Claims**

Claims 1-17 are pending in the present application. Claims 5 and 7 are withdrawn.

Claim 1 has been amended per the Examiner's suggestion. Additional amendments to claim 1 are supported by the Specification, page 8, lines 15-17 and Figures 2, 3, and 6.

New claims 8-10 have been added. These claims are supported by the Specification, page 8, line 24 to page 9, line 2.

New claims 11-17 have been added. These claims are supported by the Specification at page 13, Example 1 and page 19, Example 4.

No new matter has been added.

**2. Sequence Listing**

The Examiner notes that the present application does not include a sequence listing, but does include sequences. Enclosed herewith in full compliance with 37 C.F.R. §§1.821-1.825, is an electronic copy of a Sequence Listing respectfully submitted in connection with the above-identified application to be inserted into the Specification. This Sequence Listing in no way introduces new matter into the Specification. The electronic copy of the Sequence Listing, file "2009\_11\_02\_Sequence\_Listing.txt", **is identical to the paper copy**, except that it lacks formatting.

No new matter has been entered.

### **3. Amendments to the Specification**

Applicants herein present a replacement set of drawings which list the SEQ ID NOs: of the sequences recited in Figures 3 and 6. Support for these amendments is found in the Specification at page 13, Example 1 and page 19, Example 4.

No new matter has been added.

### **4. Claim Objections**

The Examiner objects to claims 1-4 and 6 because the claims can be amended to improve form and clarity. Applicants have amended claim 1 to recite the Examiner's suggestions. Applicants request that the objection to the claims be withdrawn.

### **5. Claim rejections under 35 U.S.C. § 101**

The Examiner rejects claims 1-4 and 6 under 35 U.S.C. § 101 because the claims are allegedly directed to non-statutory subject matter. The Examiner indicates that the claims "read[] on naturally occurring collagen such as type 1 or type III collagen." (Office Action, page 5.)

Applicants note that the claims specifically require that the peptide trimer which has a triple-stranded region and the peptide trimer has a single-stranded region or a double-stranded region which is longer than the triple-stranded region. Accordingly, the claims do not read on naturally occurring collagen because the structure is different from that of naturally occurring collagen. Applicants request that the rejection be withdrawn.

#### 6. Claim rejections under 35 U.S.C. § 102(b)

The Examiner rejects claims 1, 2, 4, and 6 under 35 U.S.C. § 102(b) as being anticipated by Barth et al. (Chem. Eur. J., 2003, 9: 3703-14)(hereinafter Barth). Applicants have confirmed with the Examiner that claim 3 has not been rejected as anticipated.

The Examiner states that Xaa-Yaa-Gly is “the same as Gly-Xaa-Yaa.” (Office Action, page 7.) Applicants respectfully disagree. Barth suggests that the placement of both the cysteine and the glycine residues is crucial to the assembly of the peptides into trimers and agglomerates. (Barth, page 3703, col. 2, line 11 to col. 3, line 8; and page 3704, col. 2, lines 22-24.) Accordingly, a structure that has a different placement of cysteine and glycine residues would be expected to have different assembling characteristics, and consequently, different functionality.

Moreover, the peptides of the invention will have at least some different chemical bonds based on this different ordering of the amino acid sequence. Thus, the present invention is not anticipated by Barth. Consequently, Applicants request that the rejection claims 1, 2, 4, and 6 be withdrawn.

Further, the present claims (e.g., claims 8-10) present specific sequence lengths (e.g., 10-60 amino acid residues, supported in the Specification, page 8, line 24 to page 9, line 2). Thus, the actual structure will have some significant differences in function, such as stability. For instance, the Specification indicates that the stability of the triple helix is decreased when shorter chain lengths are used, yet cautions that the cost of longer chains may be high. (Specification, page 9, lines 2-5.)

In contrast, Barth does not appear to recognize any significance in the length of the peptides. Thus, Applicants submit that Barth, *at the very least*, does not anticipate claims 8-10.

**CONCLUSION**

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections and allowance of the claims.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mary M.H. Eliason, Registration No. 58,303 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

- ☒ Attached is a Petition for Extension of Time.
- ☒ Attached hereto is the fee transmittal listing the required fees.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Dated: November 2, 2009

Respectfully submitted,

By 

Gerald M. Murphy, Jr.

Registration No.: 28,977

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

Attachments: Replacement Drawings  
Sequence Listing